Name:

at1124exam: Radicals and Squares (v904)

Question 1

Simplify the radical expressions.

$$\sqrt{8} \qquad \sqrt{99} \qquad \sqrt{50}$$

Question 2

Find all solutions to the equation below:

$$2\left((x+8)^2+9\right) \;=\; 50$$

Question 3

By completing the square, find both solutions to the given equation. *You must show work for full credit!*

$$x^2 - 10x \;=\; 39$$

Question 4

Any quadratic function, with vertex at (h, k), can be expressed in vertex form:

$$y \;=\; a(x - h)^2 + k$$

A quadratic function is shown below in standard form.

$$y \;=\; 4x^2 + 24x + 41$$

Express the function in **vertex form** and identify the **location** of the vertex.